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From: Ben Cope/R10/USEPA/US
To: Brian Nickel/R10/USEPA/US@EPA
Delivered Date: 09/14/2009 03:11 PM PDT
Subject: Fw: Stateline NH4 for Proposed TMDL v Dilks Simulation

Brian -

See email train between me and Chris below for the explanation. In a word...ICE.

-BC

Ben Cope, Environmental Engineer
Office of Environmental Assessment
EPA Region 10
Seattle, Washington
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----- Forwarded by Ben Cope/R10/USEPA/US on 09/14/2009 03:09 PM -----

bergerc@cecs.pdx.edu
09/14/2009 02:41 PM

To	Ben Cope/R10/USEPA/US@EPA
cc	
Subject	Re: Fw: Stateline NH4 for Proposed TMDL v Dilks Simulation

Ben,
Yes...some of the water temperatures were getting a little too far
below zero so I thought it best to turn ice formation on.
chris

Quoting Cope.Ben@epamail.epa.gov:

> Chris -
>
> Just so I get it...
>
> So you made this change to better represent winter conditions when we
> went to Julian Day 1 start date?
>
> And now we've got ice forming conditions in some cells along the bank
> and that stops the reaeration for those cells?
>
> -BC
>
> Ben Cope, Environmental Engineer
> Office of Environmental Assessment
> EPA Region 10

> Seattle, Washington
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>
> bergerc@cecs.pdx
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> To
> 09/14/2009 02:28 Ben Cope/R10/USEPA/US@EPA
> PM cc
>
> Subject
> Re: Fw: Stateline NH4 for
> Proposed TMDL v Dilks Simulation
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>
> Hi Ben,
> I'm pretty sure this is because I turned on the ice formulation
> function for the most recent Idaho scenarios, and the Limnotech run is
> an older simulation with ice formation turned off. I completely
> forgot about doing this. Anyway, limnotech's run had ice turned off
> so there was more rearation during the cold periods in January and
> February, resulting in higher DO.
> chris
>
>
> Quoting Cope.Ben@epamail.epa.gov:
>
>> Hi Chris -
>>
>> Please see message from Brian Nickel below. Do you think the
>> early-in-year DO difference is plausible or an artifact of the model
> setup
>> (e.g., pump function, etc.)?
>>
>> Just your "at first glance" impression is fine for now. Thanks. -BC
>>
>>
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>> ----- Forwarded by Ben Cope/R10/USEPA/US on 09/14/2009 02:07 PM -----
>>
>> Brian Nickel/R10/USEPA/US
>> 09/14/2009 01:44 PM
>>
>> To
>> Ben Cope/R10/USEPA/US@EPA
>> cc
>>
>> Subject

>> Re: Stateline NH4 for Proposed TMDL v Dilks Simulation
>>
>>
>>
>>
>>
>> Hi Ben,
>>
>> There are some odd DO results at the state line.
>>
>> Here is a chart of the DO difference (TMDL #1 - Dilks). Negative
> values
>> mean the increased ammonia run produced higher DO. Most of the time
> the
>> difference is very small (<0.1 mg/L in either direction), as I
> expected,
>> but sometimes, around Day 50 and before, the DO under the Dilks
> scenario
>> is < 1 mg/L higher than under TMDL #1 (negative on the graph).
>> Here is a chart of actual DO for the Dilks scenario and TMDL #1,
> together:
>>
>> Thoughts?
>>
>> Thanks,
>>
>> Brian Nickel, E.I.T.
>>
>> Environmental Engineer
>> US EPA Region 10 | Office of Water and Watersheds | NPDES Permits Unit
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>> http://epa.gov/r10earth/waterpermits.htm
>> Please conserve natural resources by not printing this message.
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